Notice of Allowability	Application No.	Applicant(s)	
	09/757,146	KIESEL ET AL.	
	Examiner	Art Unit	
	Aaron C Perez-Daple	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed 5/24/04*.

2. ☒ The allowed claim(s) is/are *1-7, 11-18*.

3. ☒ The drawings filed on *1/9/2001* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 4/26/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

N. Sitaddy

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Scott Weingaertner (Reg. 37,756) on 11/8/04.

3. The application has been amended as follows:

In the Specification:

I. After the title insert:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 09/591,420, filed June 10, 2000, now US 6,594,541, and application Ser. No. 09/591,421, filed June 10, 2000, now US 6,539,268.

In the Claims:

II. Claim 1 (currently amended):

A motion controller having an engineering system and a run time system, and that functionally combines classic tasks of a programmable logic controller ~~PLC~~ and a numerical controller, comprising:

a uniform run level model comprising a plurality of run levels of different types having differing priorities, the plurality of run levels comprising a plurality of user-levels and system-levels having differing priorities;

a data source for containing description information for at least one of the group consisting of system variables, alarms and commands;

a converter coupled to the data source, the engineering system, and the run time system, the converter generating, based on input received from the data source, parameterization information for the engineering system and the run time system, the generated parameterization information transferred to the engineering system and the run time system, such that the generated parameterization information is internally consistent in the motion controller; and

a technology packet for loading into at least one of the group consisting of the engineering system and the run time system, the technology packet permitting a user to expand the functionality of the controller.

~~and~~

~~wherein the data source provides description information to the engineering system via the converter;~~

~~the motion controller being further configured to permit a technology packet to be loaded into at least one of the engineering system and run time systems, to provide the system variables with current data for a technical process for the run time system, and to permit input to be made via a user interface of the engineering system.~~

III. Cancel claims 8-10.

IV. Claim 11 (new):

A motion controller having an engineering system and a run time system, and that functionally combines classic tasks of a programmable logic controller and a numerical controller, comprising:

a uniform run level model comprising a plurality of run levels of different types having differing priorities, the plurality of run levels comprising a plurality of user-levels and system-levels having differing priorities;

a data source for containing description information for at least one of the group consisting of system variables, alarms and commands;

a converter coupled to the data source, the engineering system, and the run time system;

wherein the data source provides description information to the engineering system via the converter, and the converter generates, based on input received from the data source, parameterization information for the engineering system and the run time system, the generated parameterization information transferred to the engineering system and the run time system, such that the generated parameterization information is internally consistent in the motion controller; and

the motion controller being further configured to permit a technology packet to be loaded into at least one of the group consisting of the engineering system and the run time system, the technology packet permitting a user to expand the functionality of the controller.

V. Claim 12 (new):

The motion controller according to claim 11, wherein relevant documentation information is forwarded by the converter from the data source to an output medium.

VI. Claim 13 (new):

The motion controller according to claim 11, further comprising the following run levels:

a) a position-control level, comprising an associated clocked system-level and user-level,

b) an interpolator level, comprising the associated clocked system-level and user-level,

c) an event system level for events requiring a response,

d) a user-level for asynchronous errors,

e) a third user-level that is freely plan-able by the user in accordance with specific requirements, for one of the group consisting of alarm tasks, event tasks, control tasks and cyclical tasks,

f) a group of levels, formed from a series of motion sequences, free cycles, and other low-priority system tasks, for background processing, wherein a level group for real-time processing comprises run levels a to e.

VII. Claim 14 (new):

The motion controller according to claim 11, wherein the technology packets comprise:

a) code parts that represent controller specifics for the run time system; and

b) a configuration part that exhibits the allocation of those code parts to each of the system-levels, as well as the sequence of their processing, wherein information relating to the configuration part is forwarded as needed to the engineering system.

VIII. Claim 15 (new):

The motion controller according to claim 14, wherein the information of the configuration part of a technology packet is delivered to the run time system and the engineering system by use of the data source and the converter.

IX. Claim 16 (new):

The motion controller according to claim 14, wherein each technology packet comprises an adjusted number of technology object types for the run time system.

X. Claim 17 (new):

The motion controller according to claim 14, wherein the user interface information comprises at least one of the group consisting of operating parameters, programming language features and declaration parts are allocated to the code parts.

XI. Claim 18 (new):

A combined programmable logic controller (PLC) and numerical controller (NC) that functionally combines tasks of a process controller and a motion controller, the combined PLC/NC controller comprising:

a uniform run level model comprising a plurality of run levels of different types having differing priorities, the plurality of run levels configured to minimize communication between the tasks of the process controller and the motion controller by arranging the tasks of the process controller and motion controller within the plurality of run levels of different types having different priorities, such that programming of the PLC/NC controller is facilitated by a uniform programming language;

a data source for description information for at least one of the group consisting of system variables, alarms and commands;

a converter coupled to the data source, the engineering system, and the run time system, the converter generating, based on input received from the data source, parameterization information for the engineering system and the run time system, the generated parameterization information transferred to the engineering system and the run time system, such that the generated parameterization information is internally consistent in the motion controller; and

a technology packet for loading into at least one of the group consisting of the engineering system and the run time system, the technology packet permitting a user to expand the functionality of the controller.

4. The following is an examiner's statement of reasons for allowance: The prior art in record does not teach or suggest a motion controller having all the claimed limitations including loading a technology packet to the engineering or runtime systems, wherein a technology packet has been explicitly defined in page 4 of the specification as comprising code parts that represent the control specifics for the run time system and a configuration part that shows the allocation of these code parts to each of the system-levels and the order in which they are processed, where this information of the configuration part can also be forwarded to the engineering system as needed. Therefore, the present invention teaches an improved motion controller.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Information Disclosure Statement

6. The information disclosure statement filed 4/26/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but reference DE 29600609 U1 referred to therein has not been considered.

Conclusion

7. The prior art made of record and not relied upon is cited because it demonstrates the state of the art: US 5,768,119.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (571) 272-3974. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access

to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/15/04

Aaron Perez-Daple

N. Elliott